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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,517	03/17/2004	Charles M. Coushaine	02-1-863	3973

7590 01/10/2006  
OSRAM SYLVANIA Inc.  
100 Endicott Street  
Danvers, MA 01923

EXAMINER
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REHM, ADAM C

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/802,517	<b>Applicant(s)</b> COUSHAIN, CHARLES M.	
	<b>Examiner</b> Adam C. Rehm	<b>Art Unit</b> 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-8 and 10-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,10,11,13,15-20,23 and 24 is/are rejected.
- 7) ☒ Claim(s) 12,14,21 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 13 recites the limitation "the first side" in Line 2. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1, 3-8, 10-11, 13, 15-17, 19-20 and 23-24 are rejected under 35 U.S.C. 102(b) as being anticipated by ENGLISH ET AL. (US 2003/0063476). ENGLISH provides:

- A heat conductive stem/skirt (elongated portion of 16/20) having a forward direction/axis (90, Fig. 1), a reflective surface that diffuses light (Paragraph 23 discloses that the stem reflects/diffuses light), a base/bottom end and a distal/top end (Fig. 1);
- A channel/thermally conductive path (interior portion of 16/20, Fig. 1);

- A solid heat conductive plate having a first side that is a beveled/planar radial surface/tab that is mounted on the stem distal end forming a fixed angle therewith (26) and a plate second side (side opposite 26/top of 18);
- Wherein the plate has a radius greater than the stem radius so that the plate overhangs the stem (Fig. 1);
- Wherein the stem and axis extends transversely to the plate having an internal through passage (Fig. 1 illustrates a ninety-degree/right-angle engagement between the stem and plate; Fig. 1 illustrates an internal passage/ducting for circuitry 62/64);
- A plurality of LEDs (22) connected in series (Paragraph 0019, Lines 12-13), supported on the plate first side along the radial periphery/on tabs angled with respect to the plate (26, Fig. 1 illustrates plate portions or tabs angled with respect to the central tab bottom that joins the stem 20), facing towards the base end and directed away from the stem and away from the forward direction so that the LEDs are not directly visible from the forward direction (Fig. 1);
- Electrical circuitry deposited/supported on a side of the plate providing electrical connection to the LEDs (22/62/64, Fig. 1 illustrates circuitry 22/62/64 connected/supported/deposited on one side of 26 in addition to the LEDs 22, which require electrical connection);
- A reflective surface supporting/mechanically coupled to the stem (12);

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- A heat-dispersing structure/skirt extending from the base end of the stem (72, Fig. 6); and
- A cap covering the second side of the plate (18, Fig. 1 illustrates a solid head 18 that covers the plate second side 26).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over ENGLISH ET AL. (US 2003/0063476) as applied to claim 13 above, and further in view of MARTIN ET AL. (US 2003/0227774).
4. ENGLISH discloses the invention as provided for in Claim 13 but does not provide a stem with an exterior surface that absorbs light. However, MARTIN teaches a stem/post (206) that absorbs light for the purpose of provide a stem with excellent heat conduction while maximizing emissivity and optical radiation (Paragraph 52, Lines 4-8). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the ENGLISH stem and use the black stem as taught by MARTIN in order to provide a stem with improved heat conduction and maximum emissivity and optical radiation (Paragraph 52, Lines 4-8).

***Drawings***

5. The objection to the drawings is withdrawn. The drawings are accepted.

***Response to Arguments***

6. Applicant's arguments filed 10/31/2005 have been fully considered but they are only partially persuasive.

7. Applicant argues that ENGLISH does not disclose a heat conductive plate with a first side and a second side. However, Fig. 1 illustrates a heat-conductive plate (26/18, Paragraph 18) with LEDs (22) mounted on a first side. Examiner interprets the side opposite the first side to be a second side.

8. Applicant argues that ENGLISH does not disclose LEDs mounted on a flat carrier plate. Notably, the features upon which applicant relies (i.e., flat carrier plate) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

9. Applicant argues that ENGLISH does not disclose a heat conductive plate that can be integrated with a heat-sinking column. As previously noted, the stem (16), LEDs (22) and head portion (18) are "coupled to enable good heat conduction...formed from metal" (Paragraph 18).

10. Applicant argues that ENGLISH does not disclose tabs formed on a plate, bent and fixed to point the LEDs. Notably, the features upon which applicant relies (i.e., tabs formed on a plate) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). ENGLISH, Figure 1, illustrates tabs (26) bent to point LEDs (22).

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11. Applicant argues that ENGLISH does not disclose a solid heat conductive plate with a tab having a fixed angle to the axis. Notably, the term "solid" is ambiguous and not contrary to the term "floppy." Furthermore, the use of a floppy star is not distinguishable from Applicant's circuitry pads (44, Fig. 1). Both are tabs that support LEDs and engage a heat conductive surface that is angled (Applicant's Fig. 3).

12. Applicant argues that ENGLISH does not disclose a recess as claimed. This point is conceded and the rejection is withdrawn.

13. Applicant argues that ENGLISH does not disclose electrically insulating guides. Notably, the entire internal stem cavity guides the leads (62, 64, Fig. 1) including the lugs (66, 68). However, it is conceded that ENGLISH does not show electrically insulating guides with progressively narrower diameters. The related rejections are withdrawn.

14. Applicant argues that ENGLISH does not disclose a stem surface that diffusing light. As noted, ENGLISH discloses a reflective stem that reflects light (Fig. 1). It is the Examiner's position that the ENGLISH surface is diffusely reflective, i.e. the stem surface is curved and therefore reflects or diffuses light in all directions.

15. Applicant argues that ENGLISH in view of MARTIN, does not disclose a stem surface that absorbs light. While the structure of MARTIN is not precisely analogous to ENGLISH, the general concept is. Both provide LEDs mounted on a central stem situated within a reflector. While the ENGLISH stem discloses a reflective stem, MARTIN teaches a stem/post (206) that absorbs light for the purpose of provide a stem with excellent heat conduction while maximizing emissivity and optical radiation

(Paragraph 52, Lines 4-8). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the ENGLISH stem and use the black stem as taught by MARTIN in order to provide a stem with improved heat conduction and maximum emissivity and optical radiation (Paragraph 52, Lines 4-8). The rejection is maintained.

***Allowable Subject Matter***

16. Claims 12, 14, 21 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

17. The following is a statement of reasons for the indication of allowable subject matter: no art of record discloses or otherwise suggests a light source comprising a heat-conductive stem and plate as claimed having: (1) a recess surrounding an LED having a surface wall reflecting light (per Claim 12); (2) electrically insulating guides with progressively narrow diameters for guiding the leads in the stem (per Claims 14 and 22); or (3) a cap coupled through a passage in the plate to the stem thereby retaining the plate between the stem and cap (per Claim 21).

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

18. LIN (US 2003/0016536) discloses a light source having a central stem that diffuses/absorbs light with a two-sided plate mounted on a stem distal end.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam C. Rehm whose telephone number is 571.272.8589. The examiner can normally be reached on M-F 9-5:30 EST.

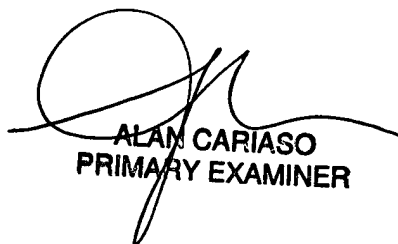
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 571.272.2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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ACR  
12/28/2005



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PRIMARY EXAMINER